Inventor: OGAWA
Docket No. 3.255USDI
Title: LIQ YSTAL ALIGNMENT FILM AND METHOD FOR PRODUCIN
SAME, AND UID CRYSTAL DISPLAY APPARATUS USING THE SAME AND
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
Sheet 1 of 28

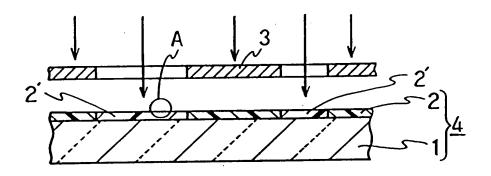


FIG. 1

Inventor: OGAWA Docket No.: 3.255USD1

DOCKET NO. 3.255USD1
Title: LIQ YSTAL ALIGNMENT FILM AND METHOD FOR PRODUCIN
SAME, AND UID CRYSTAL DISPLAY APPARATUS USING THE SAME AN
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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FIG. 2

Inventor: OGAWA
Docket No. 23.255USD1
Title: LIQ LYSTAL ALIGNMENT FILM AND METHOD FOR PRODUCIN
SAME, AN QUID CRYSTAL DISPLAY APPARATUS USING THE SAME AN
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
Sheet 3 of 28

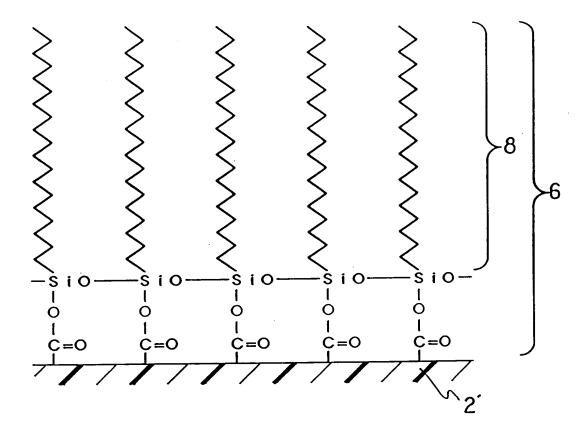


FIG. 3

Title: LIQ RYSTAL ALIGNMENT FILM AND METHOD FOR PRODUCI SAME, AN OUID CRYSTAL DISPLAY APPARATUS USING THE SAME ATTOMEY Name: Douglas P. Mueller Phone No.: 612.371.5237 Sheet 4 of 28

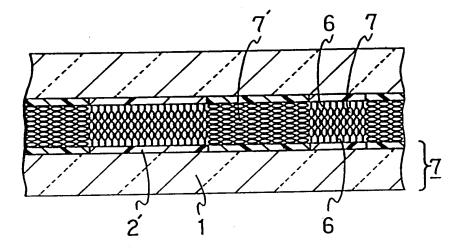


FIG. 4

Inventor: OGAWA
Docket No.: 73.255USD1
Title: LIQU YSTAL ALIGNMENT FILM AND METHOD FOR PRODUCIN
SAME, AND JID CRYSTAL DISPLAY APPARATUS USING THE SAME AND
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
Sheet 5 of 28

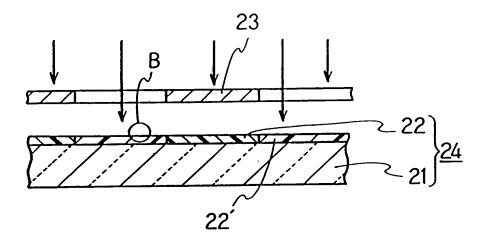


FIG. 5

Title: LIQUE YSTAL ALIGNMENT FILM AND METHOD FOR PRODUCING SAME, AND WID CRYSTAL DISPLAY APPARATUS USING THE SAME AND METHOD FOR PRODUCING THE SAME AUTORIEV Name: Douglas P. Mueller Phone No.: 612.371.5237
Sheet 6 of 28

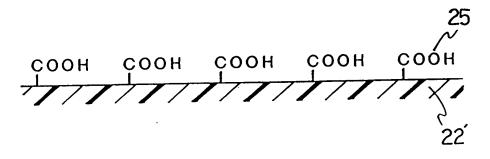


FIG. 6

Inventor: OGAWA
Docket No.: 1087
Title: LIQUID C
L ALIGNMENT FILM AND METHOD FOR PRODUCING TH
SAME, AND LIQUED C
RYSTAL DISPLAY APPARATUS USING THE SAME AND
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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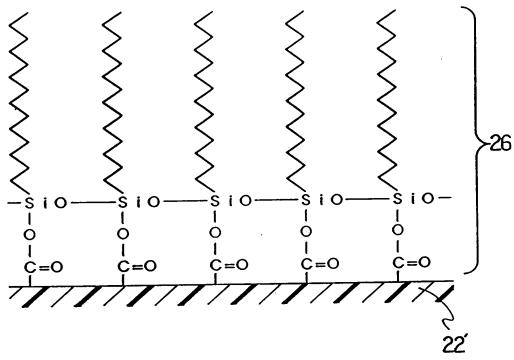


FIG. 7

Inventor: OGAWA Docket No.: 73.255USD1

Docket No.: 73.255USD1
Title: LIQI YSTAL ALIGNMENT FILM AND METHOD FOR PRODUCIN SAME, AN UID CRYSTAL DISPLAY APPARATUS USING THE SAME AN METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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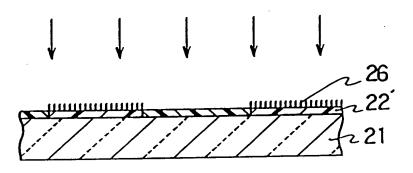


FIG. 8

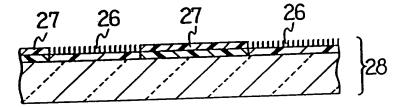


FIG. 9

Inventor: OGAWA
Docket No.: 10877 USD1
Title: LIQUID C L ALIGNMENT FILM AND METHOD FOR PRODUCING TH
SAME, AND LIQ RYSTAL DISPLAY APPARATUS USING THE SAME AND
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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FIG. 10

AL ALIGNMENT FILM AND METHOD FOR PRODUCING THE SAME, AND LIQUID CRYSTAL DISPLAY APPARATUS USING THE SAME AND METHOD FOR PRODUCING THE SAME ATTOMIC Name: Douglas P. Mueller Phone No.: 612.371.5237 Sheet 11 of 28

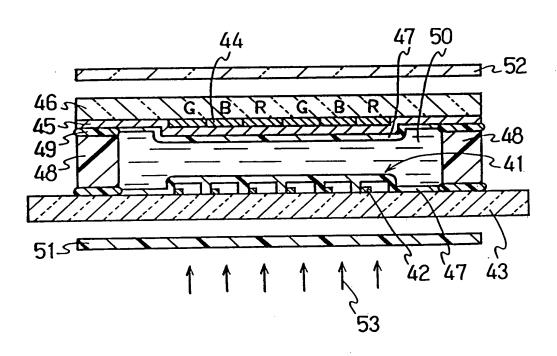


FIG. 11

Inventor: OGAWA
Docket No.: 2,255USD1
Title: LIQU STAL ALIGNMENT FILM AND METHOD FOR PRODUCING
SAME, AND JID CRYSTAL DISPLAY APPARATUS USING THE SAME AND
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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FIG. 12

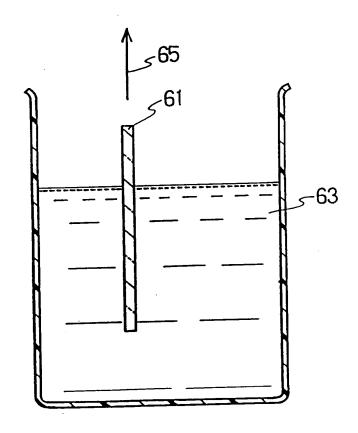
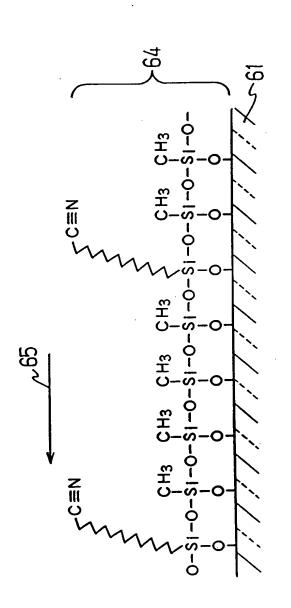


FIG. 13

Inventor: OGAWA
Docket No.: 1995
SSUSD1
Title: LIQUIT
SAME, AND LA STD CRYSTAL DISPLAY APPARATUS USING THE SAME AND
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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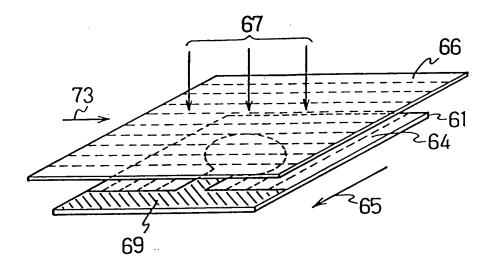


FIG. 15

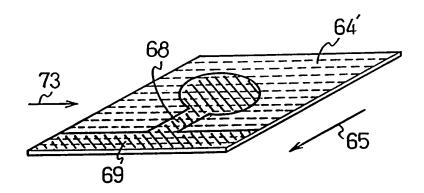
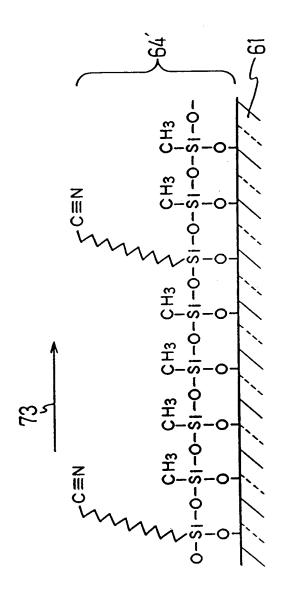


FIG. 16

Title: LIQ YSTAL ALIGNMENT FILM AND METHOD FOR PRODUCING SAME, AN UID CRYSTAL DISPLAY APPARATUS USING THE SAME AN METHOD FOR PRODUCING THE SAME Attorney Name: Douglas P. Mueller Phone No.: 612.371.5237 Sheet 15 of 28



Inventor: OGAWA
Docket No.: 255USDI
Title: LIQU STAL ALIGNMENT FILM AND METHOD FOR PRODUCING
SAME, AND SUID CRYSTAL DISPLAY APPARATUS USING THE SAME AND
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237

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FIG. 18

FIG. 19

Inventor: OGAWA
Docket No.: 10873 35 USD1
Title: LIQUID CLAUSE LALIGNMENT FILM AND METHOD FOR PRODUCING TH
SAME, AND LIQUID CRYSTAL DISPLAY APPARATUS USING THE SAME AND
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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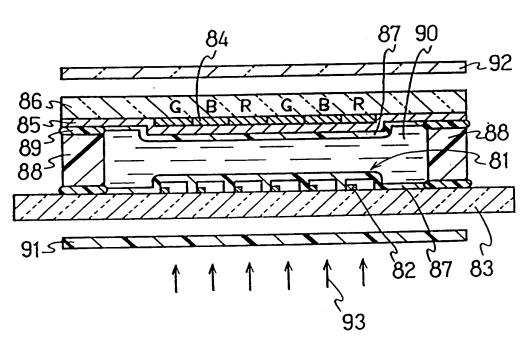


FIG. 20

Inventor: OGAWA
Docket No. 183.255USD1
Title: LIQ YSTAL ALIGNMENT FILM AND METHOD FOR PRODUCIN
SAME, AND UID CRYSTAL DISPLAY APPARATUS USING THE SAME AN
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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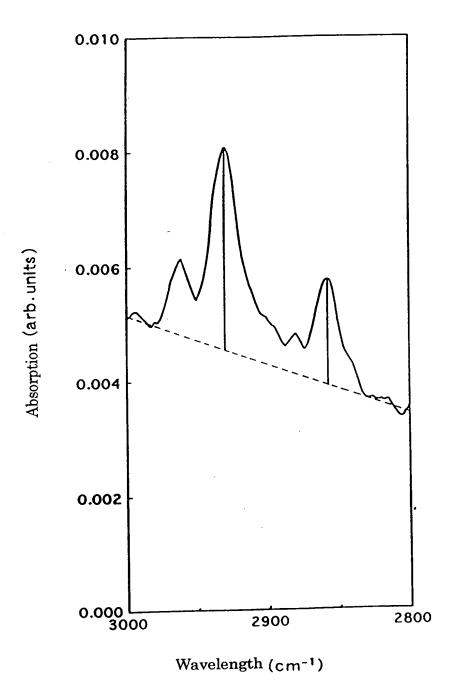
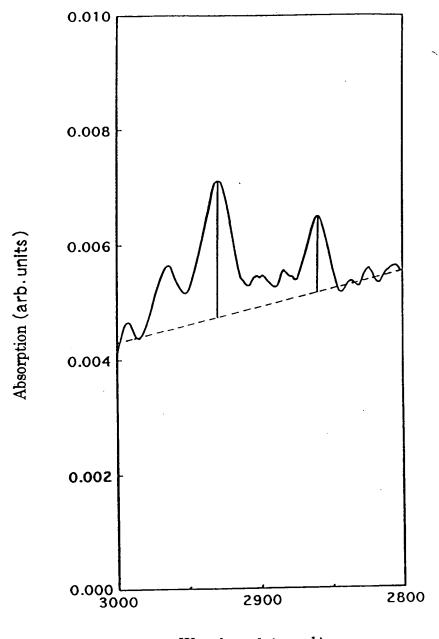


FIG. 21

Inventor: OGAWA
Docket No.: 10873 2-51 SD1
Title: LIQUID CR
SAME, AND LIQUID YSTAL DISPLAY APPARATUS USING THE SAME AND
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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Wavelength(cm⁻¹)

FIG. 22

Inventor: OGAWA
Doctor: 10873.255USD1
Title JID CRYSTAL ALIGNMENT FILM AND METHOD FOR PRO
SAN OD LIQUID CRYSTAL DISPLAY APPARATUS USING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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FIG. 23

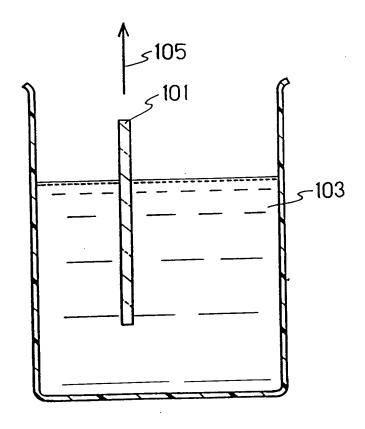
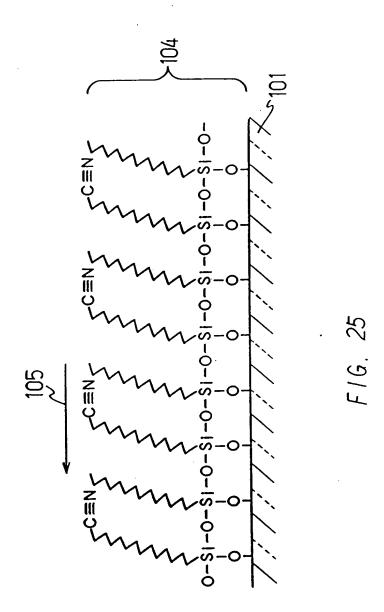


FIG. 24

Inventor: OGAWA
Docket N. 73.255USD1
Title: LIO RYSTAL ALIGNMENT FILM AND METHOD FOR PRODUCI
SAME, AND LIQUID CRYSTAL DISPLAY APPARATUS USING THE SAME AN
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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Inventor: OGAWA
Doci : 10873.255USDI
Titl : JID CRYSTAL ALIGNMENT FILM AND METHOD FOR PRO
SAN. AD LIQUID CRYSTAL DISPLAY APPARATUS USING THE SAN
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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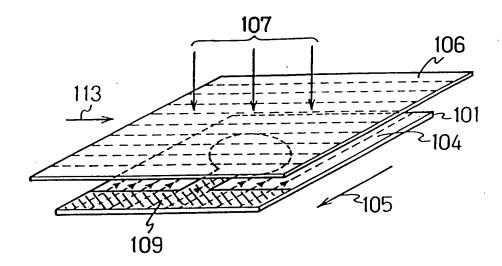


FIG. 26

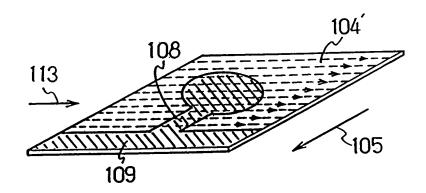


FIG. 27

Inventor: QGAWA
Docket 10873.255USD1
Title: CRYSTAL ALIGNMENT FILM AND METHOD FOR PRODUCE HE
SAME, ARD LIQUID CRYSTAL DISPLAY APPARATUS USING THE SAME AND
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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F16. 28

Inventor: OGAWA
Docky 10873.255USD1
Title D CRYSTAL ALIGNMENT FILM AND METHOD FOR PROD
SAME D LIQUID CRYSTAL DISPLAY APPARATUS USING THE SAM
METHOD FOR PRODUCING THE SAME

Attorney Name: Douglas P. Mueller Phone No.: 612.371.5237

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FIG. 29

FIG. 30

Title: D CRYSTAL ALIGNMENT FILM AND METHOD FOR PRODUSAME, LIQUID CRYSTAL DISPLAY APPARATUS USING THE SAME METHOD FOR PRODUCING THE SAME Attorney Name: Douglas P. Mueller Phone No.: 612.371.5237 Sheet 25 of 28

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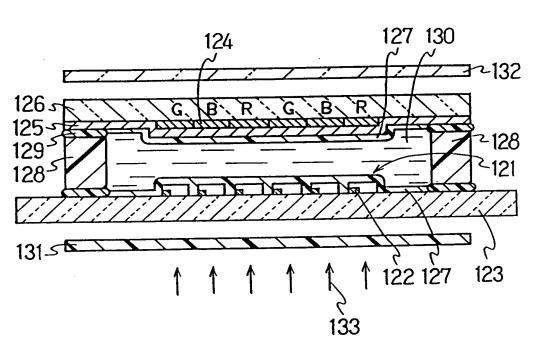
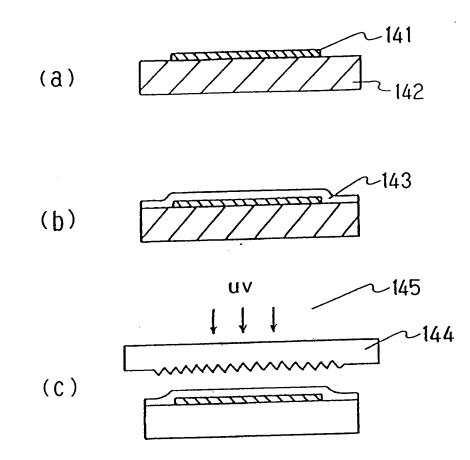


FIG. 31

Inventor: OGAWA
Docket No., \$3.255USD1
Title: LIQI YSTAL ALIGNMENT FILM AND METHOD FOR PRODUCIN
SAME, AND UID CRYSTAL DISPLAY APPARATUS USING THE SAME AN
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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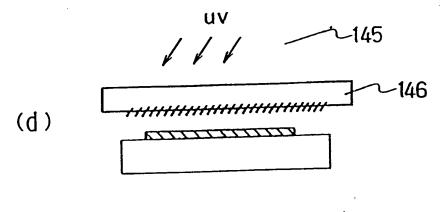
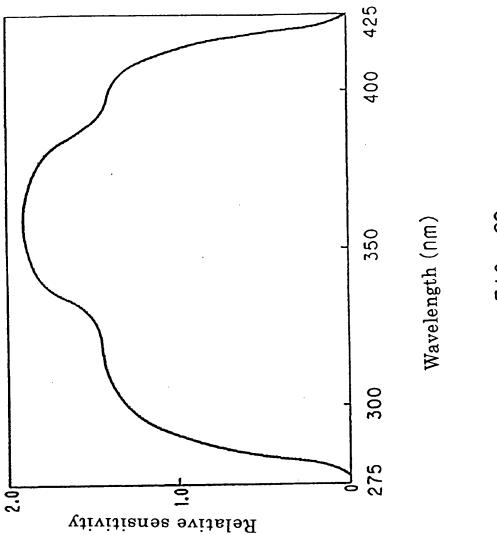


FIG. 32

Inventor: OGAWA
Docket No.: 155USD1
Title: LIQUID TAL ALIGNMENT FILM AND METHOD FOR PRODUCING SAME, AND EACH OLIVE TAL ALIGNMENT FILM AND METHOD FOR PRODUCING THE SAME AND METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller

Attorney Name: Douglas P. Mueller Phone No.: 612.371.5237

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F16, 33

Inventor: OGAWA
Docket N 873.255USD1
Title: Li PRYSTAL ALIGNMENT FILM AND METHOD FOR PRODUC
SAME, A. 1QUID CRYSTAL DISPLAY APPARATUS USING THE SAME
METHOD FOR PRODUCING THE SAME
Attorney Name: Douglas P. Mueller
Phone No.: 612.371.5237
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1 A

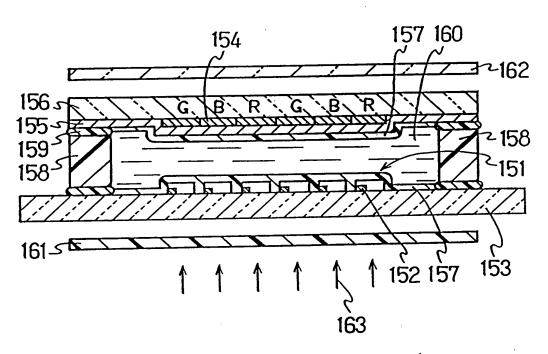


FIG. 34